

## REMARKS

Claims 1-16 are pending herein. Claim 1 has been amended as supported by Table 1 on page 8 of the substitute specification filed August 15, 2002. Attached hereto as page 6, pursuant to Rule 1.121(c)(1)(ii), is a marked-up version of the amended claim.

1. Claims 1-4, 6-9 and 13-15 were rejected under §103(a) over WO 98/05989/Watanabe et al. (U.S. Patent No. 6,045,269) (hereinafter "Watanabe"). To the extent that this rejection might be applied against amended claim 1, it is respectfully traversed.

With reference to Fig. 1 of the present application, pending independent claim 1 has been amended to recite that a distance (Y) between the flat surfaces of substrate 3 and cover plate 5 is  $L/6 \leq Y \leq L/2$ , wherein (Y) is a thickness of adhesive layer 6 and (L) is a distance from a contact point (P) between housed optical fibers 1 and housing grooves (4) to cover plate 5. As discussed in the prior Amendment, Applicants discovered that delamination of the optical fiber array along peripheral areas (i.e., flat surfaces) on opposite sides of the V-grooves could be prevented by controlling the adhesive layer thickness (Y in the equality recited in claim 1) between the substrate and the cover plate to be within a certain range.

The PTO states that Fig. 4b of Watanabe shows an adhesive layer having a thickness (Y) of  $87.38 \mu\text{m}$  between the flat surfaces of substrate 21 and pressing member 23. The PTO calculated the distance (L) to be  $106.69 \mu\text{m}$  from a contact point between Watanabe's housed optical fibers and the housing grooves to a surface of the pressing member.

As discussed above, pending independent claim 1 now recites the inequality that  $L/6 \leq Y \leq L/2$ . Based on the PTO's own calculations discussed above,  $Y = 87.38 \mu\text{m}$  and  $L/2 = 53.35 \mu\text{m}$ . Therefore, because Y (i.e.,  $87.38 \mu\text{m}$ ) is greater than  $L/2$  (i.e.,  $53.35 \mu\text{m}$ ), Watanabe does not disclose or suggest a structure that would satisfy the inequality now recited in pending claim 1.

In view of all of the foregoing, reconsideration and withdrawal of the §103(a) rejection over Watanabe are respectfully requested.

2. Claims 1-3, 6, 7 and 13-15 were rejected under §103(a) over Ota et al. To the extent that this rejection might be applied against amended claim 1, it is respectfully traversed.

In the prior Amendment, claim 1 was amended to recite that the adhesive is provided *directly* between the substrate and the cover plate to fix the optical fibers in the housing grooves. Applicants explained to the PTO how the “an adhesive provided directly between the substrate and the cover plate” limitation defines patentable subject matter over Ota et al. Because the PTO did not respond to Applicants’ arguments, those arguments are reiterated below.

With reference to Fig. 13 of Ota, an optical transmitting member-holding structure includes fixing and holding substrates 104 and 128, respectively. A joining layer 129 includes a solder layer 130 sandwiched between metallizing layer 131 (formed on a lower surface of substrate 104) and metallizing layer 132 (formed on an upper surface of holding substrate 128). Because solder 130 is not an “adhesive” as claimed, and does not *directly* contact the fixing and holding substrates 104 and 128, respectively, there is no disclosure or suggestion in Ota that an adhesive is “provided directly between the substrate and the cover plate,” as recited in pending independent claim 1.

In view of the foregoing, reconsideration and withdrawal of the §103(a) rejection over Ota et al. are respectfully requested.

3. Claims 5, 10-12 and 16 were rejected under §103(a) over Watanabe or Ota et al. in view of EP 0943942 (assigned to the same assignee as that of the present application). Applicants respectfully submit that the arguments submitted above distinguish claim 1 from

Watanabe and Ota et al. Since EP '942 does not overcome the deficiencies of Watanabe and Ota et al., and since claims 5, 10-12 and 16 depend either directly or indirectly from claim 1, claims 5, 10-12 and 16 are also believed to be allowable over the applied art of record.

**The Examiner is requested to confirm receipt and consideration of the Information Disclosure Statement filed contemporaneously herewith.**

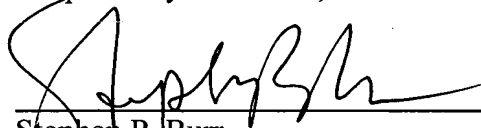
If the Examiner believes that contact with Applicants' attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

April 28, 2003

Date

Respectfully submitted,



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1. (Thrice Amended) An optical fiber array, comprising: a holding member including a substrate having flat surfaces arranged on opposite sides of a group of sectional V-shaped housing grooves formed in said substrate for housing optical fibers on a top face, said optical fibers each having an optical fiber tip end bare portion housed in said holding member; a cover plate positioned on the substrate; and an adhesive provided directly between the substrate and the cover plate to fix the optical fibers in the housing grooves, wherein a distance between a center axis of the outermost housing groove and an end portion of the substrate is at least five times larger than the radius of the optical fibers, and a distance Y between the flat surfaces of the substrate and the cover plate is  $L/6 \leq Y \leq L/2$ , wherein Y is a thickness of the adhesive and L is a distance from a contact point between the housed optical fibers and the housing grooves to the cover plate.

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**  
**Amended claim**